



AFRL's Assured Aerospace Fuels Research Facility features a state-of-the-art plant to produce sub-pilot plant volumes of alternative fuels. The facility is open to use by public and private sector partners.

Photo credit: Bill McCuddy, U.S. Air Force



AIR FORCE RESEARCH LABORATORY
U.S. Department of Defense – U.S. Air Force

Collaboration Advances Alternative Fuel Development

In an effort to achieve mutual goals related to alternative fuel development, federal and state agencies are teaming with the Air Force Research Laboratory's (AFRL) Aerospace Systems Directorate at Wright-Patterson Air Force Base, Ohio, to develop alternative aviation fuels. The Federal Aviation Administration (FAA), Department of Energy, Department of Defense, and the Department of Agriculture are all part of the team efforts.

Federal and state agencies have made significant investments in AFRL's Assured Aerospace Fuels Research Facility (AAFRF) at Wright-Patterson so that alternative fuel samples at sub-production levels could be produced for testing and evaluation. The Aerospace Systems Directorate has made the AAFRF available for public- and private-sector use, further contributing to the overall goal of diversifying fuel sources for the Air Force while benefiting budgets, businesses, the economy, and jobs.

In response to this new opportunity, the State of Ohio, through JobsOhio funding, coordinated with the Dayton Development Coalition and Wright Brothers Institute to bring together universities, businesses, and government to more fully utilize the AAFRF. The facility's capabilities were presented to interested parties through an Energy Forum and webinars. Additionally, simplified fee-for-service model and Cooperative Research

and Development Agreement processes were created to enable use of the facility. The Aerospace Systems Directorate makes additional facilities available as well for testing capabilities for drop-in replacement fuels.

Current examples point to the potential benefits arising from this effort. The Aerospace Systems Directorate is in negotiations to produce a slate of fuels derived from alternate sources at the AAFRF for one of the Energy Forum attendees. The company will provide feedback and funding for the AAFRF to produce 1,000 gallons or more of alternative fuels for testing and evaluation. In addition, AFRL has developed a successful relationship with alternative fuel producer Virent, which delivered 100 gallons of its bio-based jet fuel (produced under contract to the FAA), made from 100% renewable plant sugars, to AFRL for testing. Product testing will begin at Wright-Patterson to validate Virent's jet fuel against the standards required for qualification and approval of new aviation turbine fuels established by the American Society for Testing and Materials. The validation plan includes fit-for-purpose, fuel system, and combustor rig testing.

Such collaborative efforts benefit all parties and assure the more complete utilization of a federal asset.



OHIO



www.wpafb.af.mil/AFRL



facebook.com/pages/Team-AFRL/169321689771166



[@Team_AFRL](https://twitter.com/Team_AFRL)